VQ2000 technical data (technical data is subject to change without notice)

basic device		
Dimensions	**Weight**	**Energy supply**
245 x 280 x 35mm (W x H x D)	approx. 1,5 kg	rechargeable batteries; a special electronic-feature keeps your batteries from overcharging or deep discharging
Sensor (A-PPG)		
Dimensions	**Weight**	**Electronics**
25 x 10 mm (D x H)	approx. 5 g	low-noise signal pre-amplifier
Sensor (D-PPG)		
Dimensions	**Weight**	**Electronics**
20 x 9 mm (D x H)	approx. 7 g	low-noise signal pre-amplifier, wavelength of the LED: 940 nm
Battery charger		
Line voltage	**Power consumption**	**Charging voltage**
230 VAC / 50 Hz	15 VA	12 V

Tourniquet-Cuffs (Option)		
Width	**Length**	
3 cm	optional 45, 60 or 90 cm adjustable by velcro fastener	

vasoview® (Option) technical data (technical data is subject to change without notice)		
Included in delivery	**System requirements**	
Software	**Processor**	**Interface**
CD	Pentium or higher	free serial interface (COM1 to COM4) or USB-interface (with adapter)
Cable	**Harddisk**	**Operating system**
Connection cable VQ2000 / workstation	min. 20 MB free disk space	Windows 9x, 2000, XP
Additional	**Data base**	**Data base interface**
Installation instructions and operating manual	approx. 5KB per measurement approx. 1KB per patient	GDT / BDT

Are you interested in the vasoquant 2000?
Then call us!
We would be pleased to tell you more about your possibilities with the VQ2000!

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presented by

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vasoquant® 2000

Quantitative Photoplenthysmography

Competence in vascular diagnosis

LRR

dual-channel-photoplethysmograph
Arterial acral function diagnosis
Venous function diagnosis
D-PPG / LRR

VQ2000 INT

ELCAT innovative medical products

VQ2000

In 1981 light reflexion rheography (LRR) was developed in Germany as a method to diagnose venous insufficiency. With appropriate wavelengths and well designed lightray geometries, changing amounts of blood in the superficial veins can be recorded. The critical parameter is skin reflectivity that changes within the measured area.

Venous pump power is determined by the movement of patient calf muscle contraction. As peripheral venous pressure decreases with calf muscle action, arterial inflow refills the leg.

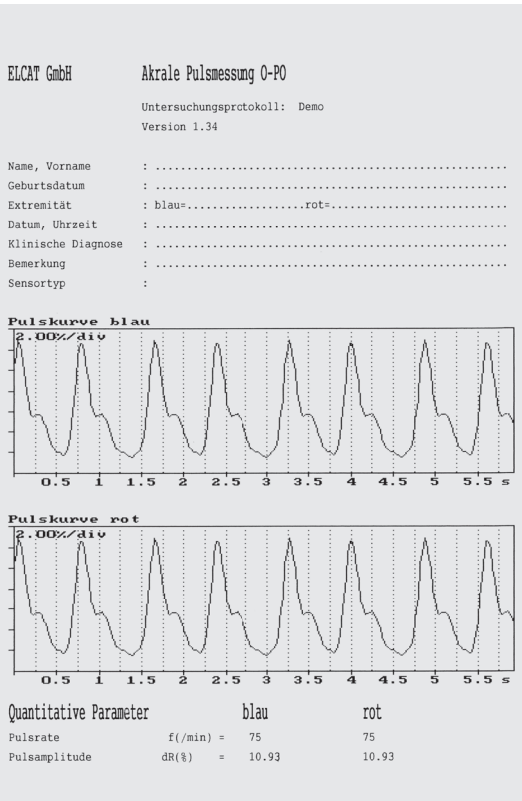
Arterial function diagnosis

- determination of the actual arterial blood circulation and quantification of form and amplitude of the pulse
- special sensors for micro- and macro-circulation
- peripheral acral pressure measurement
- post ischaemic reactive hyperemia

The D-PPG method is a consequent patented further development of the LRR-method.

Venous function diagnosis

- measurement of venous function i.e. quantifying the venous pump power of the calf muscle pump even while wearing medical stockings
- determination of the degree of venous insufficiency
- evaluation of leg pain with uncertain origin, assessment of need for surgical or medical intervention



ELCAT GmbH — Akrale Pulsmessung O-PO

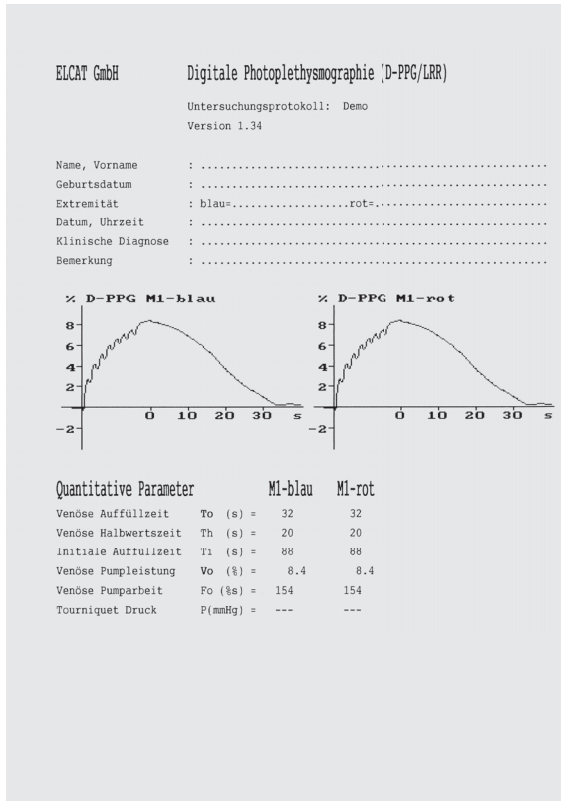
Untersuchungsprotokoll: Demo
Version 1.34

Name, Vorname : .....
Geburtsdatum : .....
Extremität : blau=.....rot=.....
Datum, Uhrzeit : .....
Klinische Diagnose : .....
Bemerkung : .....
Sensortyp :

Pulskurve blau

Pulskurve rot

Quantitative Parameter		blau	rot
Pulsrate	f(/min) =	75	75
Pulsamplitude	dR(%) =	10.93	10.93



ELCAT GmbH — Digitale Photoplethysmographie (D-PPG/LRR)

Untersuchungsprotokoll: Demo
Version 1.34

Name, Vorname : .....
Geburtsdatum : .....
Extremität : blau=.....rot=.....
Datum, Uhrzeit : .....
Klinische Diagnose : .....
Bemerkung : .....

Quantitative Parameter		M1-blau	M1-rot
Venöse Auffüllzeit	To (s) =	32	32
Venöse Halbwertszeit	Th (s) =	20	20
initiale Auffüllzeit	Ti (s) =	88	88
Venöse Pumpleistung	Vo (%) =	8.4	8.4
Venöse Pumparbeit	Fo (%s) =	154	154
Tourniquet Druck	P(mmHg) =	---	---

Functional range of vasoquant 2000

- automatic saving-feature for up to 60 measurements
- freely portable (no cable because of rechargeable batteries); an automatic shut-down after three minutes ensures long operating time
- automatic self-test before every measurement ensures a reliable measurement-process
- the display shows menus, measurement-process, measurement results and charging state of batteries
- special sensors with an optimized measurement range improve findings about the blood filling of acral vessels

All in one case...

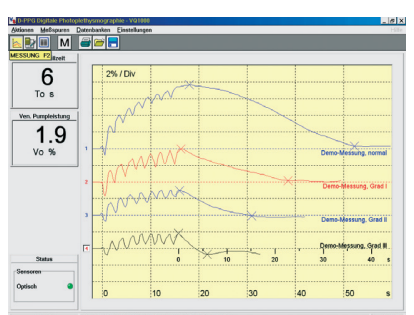
- vasoquant 2000-device
- sensors and cuffs
- battery charger
- connection cable (to printer)
- 1 box of adhesive collars (for approx. 500 measurements)
- user manual

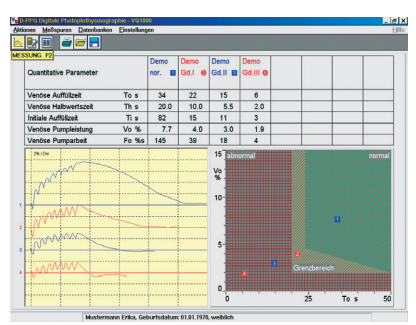
Included in delivery

- inkjet-printer

vasoview® (Option)

vasoview® vasoquant 2000-software (Windows-software) connects the vasoquant VQ2000-device to your PC or clinic's IT (GDT / BDT). Examination results can be displayed online or transfered to a PC at a later point of time. The saving-feature enables documentation and follow-up after medical intervention.




Quantitative Parameter
Venöse Auffüllzeit To s 34 22 15 6
Venöse Halbwertszeit Th s 20.0 10.0 5.5 2.0
Initiale Auffüllzeit Ti s 82 15 11 3
Venöse Pumpleistung Vo % 7.7 4.0 3.0 1.9
Venöse Pumparbeit Fo %s 145 39 18 4
abnormal
normal
Grenzbereich